

AMENDMENTS TO THE CLAIMS

1-12. (Canceled)

13. (Original) A method of coating a metallic foil with a corrosion-protective film comprising the steps of:

- (a) adhering a silica colloid to at least a portion of a metallic foil; and
- (b) exposing the silica colloid adhering to the foil to a fusion temperature to effect fusion of silica particles to thereby form a silica film on the foil.

14. (Original) The method of Claim 13 wherein at least a portion of the foil is immersed in a bath comprising colloidal silica and withdrawn so that silica colloid adheres to at least a portion thereof.

15. (Original) The method of Claim 14 wherein the foil is withdrawn from the bath at a rate of about 1 mm/sec to about 100 mm/sec.

16. (Original) The method of Claim 15 wherein the foil is withdrawn from the bath at a rate of about 25 mm/sec.

17. (Previously Presented) The method of Claim 14 wherein the bath comprises silica and methanol.

18. (Original) The method of Claim 14 further comprising the step of applying a voltage to the metallic foil concurrent with immersion and withdrawal of at least a portion of the foil in the bath.

19. (Original) The method of Claim 14, wherein the bath of colloidal silica further comprises a binder selected from the group consisting of cellulose nitrate, polyvinylalcohol, polyacrylamide, and polyvinylpyrrolidone.

20. (Original) The method of Claim 14, wherein the bath of colloidal silica further comprises a surfactant.

21. (Original) The method of Claim 14 wherein the foil comprises molybdenum.

22. (Original) The method of Claim 13 wherein silica colloid adhering to the foil is exposed to a fusion temperature of about 1400 °C to about 1700 °C.

23. (Original) The method of Claim 22 wherein silica colloid adhering to the foil is exposed to a fusion temperature of about 1600 °C to about 1700 °C.

24. (Original) The method of Claim 23 wherein the fusion temperature is about 1650 °C.

25. (Original) The method of Claim 13 wherein silica colloid adhering to the foil is exposed to the fusion temperature for about one-half second.

26. (Original) The method of Claim 13 wherein the foil comprises molybdenum.

27. (Original) The method of Claim 13 wherein the silica colloid is adhered to at least a portion of the foil by electrostatic spray coating, rolling, brushing, or misting.

28. (Original) The method of Claim 13 wherein the step of exposing the silica colloid adhering to the foil to a fusion temperature includes exposing the colloid to a heated wire coil, an induction coil, an imaging furnace, an inert gas plasma, or a laser.

29. (Currently Amended) A method of applying a silica coating to a metallic foil comprising the steps of:

introducing silica powder to the plume of an argon plasma torch; and

passing the foil through the plume; and
exposing the silica powder on the foil to a predetermined fusion temperature for
less than about 4 seconds, whereby a silica coating is formed on the metallic foil.

30. (Original) A method of making an electrical lead assembly comprising the steps of:

- (a) providing a molybdenum foil;
- (b) adhering silica colloid to at least a portion of the foil;
- (c) exposing the silica colloid to heat to effect fusion of the silica particles to thereby form a silica film; and
- (d) attaching an electrical lead to one end of the foil.

31. (Original) The method of Claim 30 wherein a second electrical lead is attached to the other end of the foil.

32. (Original) The method of Claim 31 wherein the second lead is attached to the foil by crimping a portion of the foil around a portion of the lead.

33. (Original) The method of Claim 30 wherein the electrical lead forms an electrode for a high intensity discharge lamp.

34. (Original) The method of Claim 30 wherein the electrical lead forms a filament for a halogen lamp.

35. (Previously Presented) A method of coating a metallic strip with silica comprising the steps of:

- (a) providing a heat source;

- (b) elevating the temperature of the heat source so that the temperature in close proximity to the heat source is a predetermined temperature;
- (c) adhering colloidal silica to at least a portion of said metallic strip; and
- (d) passing the metallic strip in close proximity to the heat source at a rate to effect the exposure of the ribbon to the predetermined temperature for a predetermined time, so that the exposure of the strip to the predetermined temperature effects fusion of silica particles to thereby form a silica film.

36. (Canceled)

37. (Original) The method of Claim 35 wherein the predetermined temperature is between about 1400 °C and about 1700 °C and the predetermined time is about one-half second.

38. (Original) The method of Claim 37 wherein the predetermined temperature is between about 1600 °C and about 1700 °C and the predetermined time is about one-half second.

39. (Original) The method of Claim 35 wherein the exposure is conducted in an inert atmosphere.

40. (Original) The method of Claim 35 wherein the heat source is selected from the group consisting of a conductor, induction coil, an imaging furnace, an inert gas plasma, and a laser.

41. (Original) The method of Claim 40 wherein the heat source comprises a coiled tantalum wire heated by the passage of electrical current therethrough.

42-47 (Canceled)

48. (Original) A method of coating at least a portion of a molybdenum foil with a silica film comprising the steps of:

providing a bath including colloidal silica and a binder selected from the group consisting of cellulose nitrate, polyvinylalcohol, polyacrylamide, and polyvinylpyrrolidone;

immersing at least a portion of the foil in the bath;

removing the immersed portion of the foil from the bath at a rate between about 1 mm/second to about 100 mm/second so that silica colloid adheres to at least a portion of the foil; and

heating the silica colloid adhering to the foil to a temperature between about 1400°C to about 1700°C for about one second to effect fusion of silica particles in the colloid.

49. (Original) The method of Claim 48 wherein the bath includes silica in methanol.

50. (Original) The method of Claim 48 wherein the bath includes water and ammonia and the binder is polyvinylpyrrolidone.

51. (Original) The method of Claim 48 wherein a voltage between about one volt and about ten volts is applied to the foil during the immersion and withdraw of the foil from the bath.

52. (Previously Presented) A method comprising the steps of:

adhering colloidal silica to substantially the entire surface of a metallic ribbon; and

fusing the silica particles to form a silica film.

53. (Currently Amended) The method of Claim [[53]] 52 further comprising the steps of attaching an electrode lead to at least one narrow end of the ribbon.

54. (New) A method of coating at least a portion of a molybdenum foil with a silica film comprising the steps of:

providing a bath including colloidal silica and a binder;

immersing at least a portion of the foil in the bath;

heating the silica colloid adhering to the foil to a temperature between about 1400°C to about 1700°C for a predetermined time less than about four seconds to effect fusion of silica particles in the colloid.

55. (New) The method of Claim 54 wherein the time of heating the silica colloid is less than about one second.

56. (New) The method of Claim 55 wherein the time of heating the silica colloid is about one half second.

57. (New) A method of coating at least a portion of a molybdenum foil with a silica film comprising the steps of:

providing a bath including colloidal silica and a binder;

immersing and withdrawing at least a portion of the foil in the bath;

applying a voltage to the metallic foil concurrent with the immersion and withdrawal of at least a portion of the foil in the bath; and

heating the metallic foil, whereby the silica film forms on the metallic foil.